

CLAIMS

- 1.(Original) A method for the preparation of a dispersion of zinc sulfide particles doped with copper (ZnS:Cu), said method comprising the step of performing a precipitation by mixing together a zinc salt, a sulfide, and a citrate or EDTA complex of copper ions, dissolved in several aqueous solutions.
- 2.(Original) A method according to claim 1 wherein said precipitation is performed according to the double jet principle, whereby a first solution containing said zinc salt and said citrate or EDTA complex of copper ions, and a second solution containing said sulfide are added simultaneously to a third solution.
- 3.(Previously Amended) A method according to claim 1 wherein said copper ions are copper (I) ions.
- 4.(Previously Amended) A method according to claim 1 wherein said citrate or EDTA complex of copper ions is prepared by combining copper (I) chloride with a citrate or an EDTA salt.
- 5.(Previously Amended) A method according to claim 1 further comprising the step of subjecting the mixture formed by

said precipitation step to a diafiltration and/or ultrafiltration treatment.

6.(Original) A method according to claim 5 wherein said diafiltration and/or ultrafiltration treatment is performed in the presence of a compound preventing agglomeration of said ZnS:Cu particles.

7.(Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method for the preparation of a dispersion of zinc sulfide particles doped with copper (ZnS:Cu), said method comprising the step of performing a precipitation by mixing together a zinc salt, a sulfide, and a citrate or EDTA complex of copper ions, dissolved in several aqueous solutions.

8.(Previously Entered) A method according to claim 2 wherein said copper ions are copper (I) ions.

9.(Previously Amended) A method according to claim 8 or 2 wherein said citrate or EDTA complex of copper ions is prepared by combining copper (I) chloride with a citrate or an EDTA salt.

10.(Previously Amended) A method according to claim 2 further comprising the step of subjecting the mixture formed by

said precipitation step to a diafiltration and/or ultrafiltration treatment.

11.(Previously Entered) A method according to claim 10 wherein said diafiltration and/or ultrafiltration treatment is performed in the presence of a compound preventing agglomeration of said ZnS:Cu particles.

12.(Previously Entered) A method according to any of claim 3 further comprising the step of subjecting the mixture formed by said precipitation step to a diafiltration and/or ultrafiltration treatment.

13.(Previously Entered) A method according to claim 12 wherein said diafiltration and/or ultrafiltration treatment is performed in the presence of a compound preventing agglomeration of said ZnS:Cu particles.

14.(Previously Entered) A method according to any of claim 4 further comprising the step of subjecting the mixture formed by said precipitation step to a diafiltration and/or ultrafiltration treatment.

15.(Previously Entered) A method according to claim 14 wherein said diafiltration and/or ultrafiltration treatment is performed in the presence of a compound preventing agglomeration of said ZnS:Cu particles.

16.(Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method for the preparation of a dispersion of zinc sulfide particles doped with copper (ZnS:Cu), said method comprising the step of performing a precipitation by mixing together a zinc salt, a sulfide, and a citrate or EDTA complex of copper ions, dissolved in several aqueous solutions, wherein said precipitation is performed according to the double jet principle, whereby a first solution containing said zinc salt and said citrate or EDTA complex of copper ions, and a second solution containing said sulfide are added simultaneously to a third solution.

17.(Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method for the precipitation of a dispersion of zinc sulfide particles doped with copper (ZnS:Cu), said method comprising the step of performing a precipitation by mixing together a zinc salt, a sulfide, and a citrate or EDTA complex of copper ions, dissolved in several aqueous solutions, wherein said copper ions are copper (I) ions.

18. (Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method according to claim 17, wherein said citrate or EDTA complex of copper ions is prepared by combining copper (I) chloride with a citrate or an EDTA salt.

19. (Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method for the preparation of a dispersion of zinc sulfide particles doped with copper (ZnS:Cu), said method comprising the step of performing a precipitation by mixing together a zinc salt, a sulfide, and a citrate or EDTA complex of copper ions, dissolved in several aqueous solutions, wherein said method further comprises the step of subjecting the mixture formed by said precipitation step to a diafiltration and/or ultrafiltration treatment.

20. (Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method according to claim 19, wherein said diafiltration and/or ultrafiltration treatment is performed in the presence of a compound preventing agglomeration of said ZnS:Cu particles.

21. (Canceled)

22. (Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method according to claim 16, wherein said copper ions are copper (I) ions.

23. (Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method according to claim 18, wherein said precipitation is performed according to the double jet principle, whereby a first solution containing said zinc salt and said citrate or EDTA complex of copper ions, and a second solution containing said sulfide are added simultaneously to a third solution.

24. (Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method according to claim 19, wherein said precipitation is performed according to the double jet principle, whereby a first solution containing said zinc salt and said citrate or EDTA complex of copper ions, and a second solution containing said sulfite are added simultaneously to a third solution.

25.(Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method according to claim 24, wherein said diafiltration and/or ultrafiltration treatment is performed in the presence of a compound preventing agglomeration of said ZnS:Cu particles.

26.(Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method according to claim 17, wherein said method further comprises the step of subjecting the mixture formed by said precipitation step to a diafiltration and/or ultrafiltration treatment.

27.(Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method according to claim 26, wherein said diafiltration and/or ultrafiltration treatment is performed in the presence of a compound preventing agglomeration of said ZnS:Cu particles.

28.(Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method according to claim 18, wherein said method further comprises the step of

subjecting the mixture formed by said precipitation step to a diafiltration and/or ultrafiltration treatment.

29. (Previously Amended) A Thin Film Inorganic Light Emitting Diode device comprising a coated layer containing ZnS:Cu particles prepared by a method according to claim 28, wherein said diafiltration and/or ultrafiltration treatment is performed in the presence of a compound preventing agglomeration of said ZnS:Cu particles.